

CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

MEMORANDUM FOR: COINS Project Manager, National Security Agency

SUBJECT : COINS Training Program

REFERENCE : Your Memo, dtd 31 Jan 74, subj: "Development
of Formal Training Program for COINS Users"

1. This memorandum responds to your request that CIA, Office of Training, Information Science Training Staff develop a plan for a Community-wide formal COINS Training Program. The proposed Training Program is attached.

2. Implementation of the COINS Training Program is dependent upon selection of a host facility to conduct the Program and authorization of the required resources including personnel, by appropriate authorities. Since this is a Community Program involving several agencies, it is anticipated that considerable coordination may be required prior to a decision. The Information Science Training Staff, Office of Training, CIA, is prepared to meet with interested parties to discuss the COINS Training Program in greater detail. CIA is also prepared to serve as Executive Agency and host facility for the Program.

Alfonso Rodriguez
Director of Training

Attachment: Proposed Training Program

✓ cc: COINS Program Manager [REDACTED] 25X1A
Office of Assistant Secretary of Defense for Intelligence

COINS TRAINING PLAN

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COINS TRAINING PLAN

SECTION I: INTRODUCTION

1. Purpose: The COINS Training Plan sets forth a program for developing and conducting COINS user training, starting in FY 1975 and continuing for the duration of the COINS system. It defines the contents of a COINS Training Program along with the resources and actions necessary to develop and operate the program, and a schedule for its implementation.

The ultimate utilization and pay-off from any complex system is directly dependent upon effective training in how to use the system and how to apply it to the real problems and real work of the organizations it supports. The users of COINS are Intelligence Officers working in a variety of intelligence analysis tasks. Most of them have no background in computerized information systems. Without adequate training potential users will probably not be aware of COINS capabilities, nor will they know how to use and apply these capabilities in their work.

To date COINS training has generally been conducted on a fragmented and ad hoc basis. The COINS User Support Panel, COINS Sub-system Managers, independent consultants, COINS users, the COINS Project Management Office, and others have recognized and documented the need for a more effective and formal COINS Training Program. The proposed COINS Training Program responds to that demonstrated need.

It is recognized that there are other important problems in the development of COINS which are outside the scope of a training plan and that these problems interact with the training problem. Although training alone cannot resolve all of the present problems and limitations in the fulfillment of the COINS potential, a Training Program can address one serious limitation to full utilization of COINS capabilities.

2. COINS Training Requirements: The training needs of COINS users include the following items of understanding, knowledge, and skills in the use of coins and its application to tasks of intelligence analysis:

A. Basic Training Needs: (for those unfamiliar with COINS)

- (1) Understanding the architecture and structure of the system, its hardware, software, files, languages, procedures, data-communications, and other components, and the relationships between them.

- (2) Understanding the organizational components and management of COINS.
 - (3) Learning the contents, structure, timeliness, limitations and capabilities of the approximately 50 different COINS files, and learning to use major representative files.
 - (4) Learning the use of the different COINS query languages.
 - (5) Learning the benefits and utilization of COINS in representative intelligence analysis tasks, in such fields as Economic, Political, Order of Battle, Biographic, and Current Intelligence, by means of exercises and examples.
 - (6) Developing elementary working level skills in applying COINS to these and other intelligence tasks and areas.
 - (7) Learning the near future changes in COINS capabilities, files, and structure.
- B. Refresher Training Needs: (for those who are already familiar with COINS but require an up-dating on recent changes)
- (1) Review of COINS fundamentals.
 - (2) Learning the contents and use of new COINS files, added in the past year.
 - (3) Learning new COINS procedures and capabilities, added in the past year.
 - (4) Improving working level skills in applying new COINS files and capabilities to specific intelligence tasks and application areas (Biographic, Economic, etc.).
- C. Special Subject and Group Training Needs: (for those who are already familiar with COINS but need specialized training in particular application areas such as Political or Economic Intelligence).
- (1) Learning the relevance of particular COINS files to specialized Intelligence areas and subjects, such as geographic areas (Mid-East), or subject areas (Economic Intelligence or Petroleum study). This training would involve seminars for students with similar subject interests.

- (2) Specialized help, consultation and tutoring on an ad hoc basis for small groups and individual offices who are encountering difficulty in applying COINS files to specialized problems.

D. Orientation Training Needs: (for supervisors and managers who need an understanding of the capabilities, limitations and applicability of COINS, but do not require personal skill in the use of COINS)

- (1) Overview of the capabilities, limitations and applicability of COINS, including selected files, to major fields of intelligence such as Order of Battle, Political, Economic, Biographic, and specific countries.

E. Characteristics of COINS Training Requirements: COINS Training needs are influenced by the following characteristics of the COINS System, and its users:

- (1) The COINS System is in a state of continuous and rapid change, with new files and capabilities being added and frequent changes in procedures, methods and documentation. This requires considerable refresher training of current users.
- (2) There is considerable turn-over in COINS user personnel, particularly among military service users. There is also continuing expansion in the number of actual COINS users, and a large number of untrained or partially trained potential users. These two factors account for the continuing need for basic user training.
- (3) The potential applications and uses of COINS have had only a limited exploitation, leaving a large unfilled need for the wider and fuller application of COINS capabilities in a variety of intelligence situations.
- (4) COINS Training emphasizes the development of skills in using the COINS System and its application to real intelligence tasks. It is not primarily "orientation" or "familiarization" type training. COINS Training requires the minimum use of the lecture method, and the extensive use of COINS terminals in real and realistic exercises, drills, and applications. This limits class size to 15 to 25 students, with a ratio of about two students per COINS terminal. It also

requires an instructor to student ratio of one instructor for every eight students for the exercise portions of training.

- (5) In many cases the direct application of COINS will require tutorial and ad hoc instruction of special small groups of users concerned with a particular application or problem. This kind of instruction blends into consulting with users, and user support. It is a vital part of teaching users to apply COINS.
- (6) Because of the inherent complexity of the COINS System, and the multiplicity of COINS files, formats, query languages, procedures, and documentation, user training is inherently complex and concerned with detail.
- (7) COINS user training is application and production oriented. For this reason effective training requires the development of a large number of training applications and exercises. These must be carefully designed and documented with training aids, lesson guides, and student instruction in such a manner as to accomplish specific training objectives with the greatest clarity, simplicity, economy and effectiveness possible.
- (8) COINS user training is closely allied to COINS user support. Four years of experience with the Community Information Science Training Program has demonstrated that there is a very close and natural affinity between instructor/consultants on the one hand, and student/users on the other. There is a natural and useful tendency for users to turn to their former instructors for help in solving on-the-job user problems and in making specific applications of COINS capabilities. This symbiotic relationship presents a most effective and economical way of achieving the early and direct application of COINS potential. It suggests that some if not all of the COINS "User Support Representatives" and their functions should be combined with the COINS Training Program. Anyone who is well qualified to teach the application of COINS is inherently qualified to assist users in applying it. Anyone who is well qualified to assist users in applying COINS (the main task of the User Representative) should be qualified to teach.

- (9) There is a direct and mutual dependency between the value and effectiveness of COINS training, the capabilities and limitations of the COINS system, and the over-all management and administration of COINS at several levels. The ultimate utility of COINS training can be no greater than the system itself.

SECTION II: COINS TRAINING PROGRAM

1. COINS Training Objectives: COINS Training Objectives derive from the COINS Training Requirements discussed in Section I, and in essence the objectives are to satisfy each of those specific requirements. A briefer statement of the objective of the COINS Training Program is:

COINS Training Program Objective

To provide a Community Program of training for COINS users at all levels, in the contents, useage, capabilities, limitations, changes, and applications of COINS to intelligence. The specific purpose of COINS training is to give users knowledge, understanding, skill and practice in the use of the system and its application to their intelligence work.

2. Courses and Curricula: Four specific COINS Training needs were identified under COINS Training Requirements:

- Basic Training Needs
- Refresher Training Needs
- Specialized Subject Training Needs
- Orientation Training Needs

Although there is some similarity and continuity between these separate needs, each addresses a different interest group, intelligence specialty, level of interest, or skill level. Accordingly a separate course with different contents, length, depth, focus, and treatment is required to meet each of these needs. This is largely a matter of tailoring the material to the users' needs and is essential for effective training and relevance.

The four courses or variations which would match these four requirements are:

- Basic Coins Course -- for those unfamiliar or unskilled in COINS. Covers the major COINS files and Query languages and develops skill in the use and application of COINS. One week duration. Alternatively, a two week

course would provide better skill levels.
15 to 25 students per course.

- COINS Refresher Course -- for those who require an up-date on major changes and additions to COINS. Covers changes in COINS procedures, new files, and improves skill levels. One week duration, 15 to 20 students per course.
- COINS Workshop and Special Group Instruction -- for those already familiar with COINS who need advanced or specialized training in applying COINS to particular intelligence areas, such as Order of Battle, Political Intelligence or other functional areas. Also special group ad hoc instruction for those who are having difficulty with particular applications. One week duration or as required. 20 students per course or 5 students per ad hoc group.
- COINS Orientation Course -- For supervisors and managers who require a broad overview of COINS capabilities and limitations. Two or three days duration. 15 students per course.

Sample Curricula for the Basic COINS course is appended.

The Basic COINS course should be developed first and would constitute the initial major effort. The other courses could evolve over a period of approximately one year.

3. Quantities of Training and Students: It is recommended that the COINS Training Program should build up to the following rates of training by the beginning of the second year of operation. The first year program would concentrate on the Basic COINS course.

Nominal COINS Training Program

<u>Course</u>	<u>Duration</u>	<u>Students Per Course</u>	<u>Courses Per Year</u>	<u>Student Throughput</u>
Basic COINS Course	one week (two weeks?)	20	10	200
COINS Refresher	one week	20	3	60
COINS Workshop	one week	20	3	60
COINS Orientation	half week	15	2	30
			<u>18</u>	<u>350</u>

In addition there would be ad hoc and small group instruction or consultation of a half week duration, about 20 times per year.

The above program introduces 200 new users to COINS annually, and provides refresher and special application workshop training to 120 present users per year. This is a modest level of training to accommodate the requirements of the entire Intelligence Community including military commands. A smaller program would seem inadequate to the COINS training needs, and the ultimate objective of developing extensive use of the COINS capabilities.

This nominal program can be scaled either up or down in size. However, the resources required are not directly proportional to the number of students trained, and reducing the number of courses does not reduce the needed resources proportionately. The same number of terminals are required for five courses or for ten courses. Approximately the same amount of work in preparing lectures, exercises, graphics, and other instructional material is required for five course offerings or for ten. Nearly as many instructors would be required for five courses as for ten since the teaching is a team effort and several instructors are required in the classroom or terminal room at all times. The administrative effort and expendable supply costs are proportional to the number of courses and students in the program.

On the other hand, the program can be expanded considerably from the nominal level to a larger number of courses and students with only a small increase in resources. For example, doubling the number of course offerings above the nominal level would not require twice as many instructors.

SECTION III: RESOURCES AND SCHEDULE

The resources needed to develop and then operate a COINS Training Program include suitable instructors and administrative personnel, physical facilities and equipment, and an operating budget. The instructors, physical facilities and equipment are each highly specialized and in short supply in the Intelligence Community. This becomes a very strong argument for a single, centralized COINS Training Program, although in some cases COINS training could be conducted by the centralized faculty, at remote locations.

1. Instructor and Administrative Personnel: Well qualified and dedicated instructors are the key to this program. Desirable instructor qualifications include:

- ° Formal training and experience in the technical aspects of computer systems, data-communications, programming languages, file structures, remote-batch and time-sharing systems, and associated equipment.
- ° An adequate background of experience in several fields of intelligence analysis so that the instructor may understand the problems and viewpoints of intelligence analysts.
- ° Experience, or equivalent qualification as an instructor, including the original development of new courses and blocks of instruction, lectures, exercises, and training documents.
- ° Suitable personal attributes including clarity in speech and writing, motivation, persuasiveness, enthusiasm, leadership, and a desire to help others in applying COINS to their intelligence tasks.

The staff required for the nominal Program is estimated as follows:

17 weeks of formal courses x 3 instructors full time during each course	1.0 man year
Course Administration and Program Management5 man year
Clerical	1.0 man year
Course revision, up-date, new course development system changes, documentation, preparation of exercises, lesson guides, graphics, and student hand-outs	2.0 man years
Consulting with users, developing operational applications, small group instruction, user support, and <u>ad hoc</u> instruction5 man year
	<hr/> 5.0 man years

This requires four instructors, each of whom would share in course instruction, administration, course revision and development, and consulting with users. One instructor would also serve as Program Manager, and one full-time secretary would be required for clerical and secretarial work.

These time and manpower estimates are based on four years of experience with the Intelligence Community Information Science Training Program, which has demonstrated that each of the tasks described is

essential for effective training that results in the application and use of systematic methods. Instruction consists of 17 weeks or one-third of a year of formal courses, plus the small group instruction and consulting. Three and one-half instructor man-years are available for this task, or a ratio of 10 instructor hours for each hour of formal courses. This is a low ratio for this type of training.

2. Facilities: The physical facilities and equipment needed to operate a COINS Training Program include:

- Office space and furniture for instructors and secretary.
- An approved secure storage area for the COINS terminal room and classified materials.
- Classroom facilities and equipment for 25 students.
- Eight to twelve COINS terminals. (One terminal for every two students.)

The secure terminal room, COINS terminals, and secure data-communications into the COINS network are special, costly, and long lead-time items. This makes it very desirable to use existing installations of these facilities if possible. Potential facilities are discussed in paragraph 4.

3. Budget: The FY 1975 budget estimate assumes that the program commences 1 July 1974, with all personnel aboard to commence preparing courses shortly thereafter, and that the first class will commence three months after the arrival of instructor personnel. It also assumes that existing facilities and services including classrooms, secure storage area terminal room, data-communications, terminals, printing and graphic services, and other major items will be provided by the host agency. These facilities and services would be equivalent in kind to those provided by CIA Office of Training, Information Science Training Program. The below budget accounts for additions or modifications necessary to that existing facility. These additional amounts are not covered in the present CIA, Office of Training budget and should be provided from Community sources. If existing facilities at CIA or DIS are not used, a minimum additional amount of \$100,000 and six months time would be required. This budget further assumes that individual agencies will bear the salaries and associated costs of the personnel assigned to the program.

<u>Subobject Class and Description</u>	<u>Amount</u>
2111 TDY Domestic (2 persons, 1 trip)	\$1,500
2113 TDY Overseas (2 persons, 1 trip)	3,000
2135 Local travel	2,000
2341 Telephone	2,000
2540 Contractual Services Non-Government (Facility rearrangement and other services)	15,000
2600)	
3100) Property - PRA (purchase of 10 terminals @ \$10,000 each, required for COINS training in FY 1976)	100,000
	<u>\$123,500</u>

4. Community Contribution of Resources: The COINS system and its success and utility are directly dependent upon a close integration of Community interests and capabilities. The success of the Community Information Science Training Program (ISTP) has in large measure resulted from this attitude and practice. CIA has contributed six instructors and one secretary. NSA has contributed one instructor and an intern. DIA has provided no personnel; however, contribution of the host computer for use of the DIAOLS system by DIA has been of great value. The COINS Training Program is equally dependent for success upon a close integration of Community needs and Community contributions and participation. This is most critical in the case of instructors who can contribute an understanding of the activities and viewpoints of their parent agency, provide ready access to persons and data, maintain good rapport with students from that Agency, and combine this with a Community approach.

It is therefore essential that the faculty include representatives from CIA, NSA, and DIA, as a minimum. It would be very desirable also to include representatives from State and one or more of the military services.

The Community Information Science Training Program (CIA Executive Agency) has the mission of providing information science and systems training for the Intelligence Community. A COINS Training Program is a natural task to assign to this existing organization and facility. It already has the basic facilities and experience to conduct this kind of program. These include:

- ° A cleared secure storage area terminal room.
- ° Eight DIAOLS/COINS terminals.

- Data-communications with the COINS system.
- Experience in operating Community-wide information systems courses.
- The ability to adjust and expand existing facilities to accommodate the increased number of courses and students which COINS would require.
- A location in the Chamber of Commerce building in Arlington, which is a near optimum central location to CIA, NSA, DIA, State, and the military services.

The only other existing facilities which provide a nucleus to build on are the Defense Intelligence School (DIS), in Anacostia, and the National Cryptologic School (NCS) at Baltimore-Washington International Airport. The DIS has eight DIAOLS/COINS terminals; however, the facilities and location at the DIS are poor for COINS training and the future use of the entire site is in doubt. In addition, the ISTP was moved from the DIS because adequate space and facilities could not be made available for that program. The location of National Cryptologic School is poor for a COINS Training Program, and only two COINS terminals are presently available, whereas eight to twelve are required.

The only other alternative would be to develop an essentially new facility, but this would be expensive and would delay the training program.

It should be noted that although the ISTP already has most of the facilities required to initiate COINS training in FY 1975, its small faculty is already heavily over-committed to existing and expanding requirements for Community information science training. It could not take on a COINS Training Program without the provision of the additional faculty which would be required.

It is assumed that the FY 1975 budget of \$123,500 will be provided from Community sources.

5. Organization, Administration, Management, and Operation of COINS Training: The organization, administration, management, and operation of the COINS Training Program are strongly influenced by the following:

- The limited availability of personnel and systems resources.
- The need for both effectiveness and economy.

- The scarcity of suitable instructors.
- The nature of COINS user training.
- The fact that this is a Community program and that effectiveness requires a faculty of instructors from each of the major agencies, including CIA, NSA, and DIA, as a minimum.

Responsibility for managing and operating the COINS Training Program should be assigned to a host facility. The manager of the host facility should assure the adequate coordination of the COINS Training Program with the COINS Project Manager, the Intelligence Community Staff, the USIB Information Handling Committee, and individual agencies.

6. Relationship With COINS User Support Program: The COINS User Support Program consists of three major parts: formal training; informal user assistance, collaboration, consultation, and ad hoc instruction; and administrative services such as publication of file guides. The first two of these functions are inherently symbiotic. COINS teachers are best qualified to help in formulating special COINS queries or other difficult application problems, and those who are qualified to aid users in application problems, should be qualified to teach the system. The natural relationship of mutual confidence between instructor and student encourages the student to seek help from a former instructor when he encounters difficulty in an application. Feedback from former students is essential to instructors in order to ensure that training is realistic and effective. This feedback also keeps the instructor current with actual system applications, teaching examples, and problems. Combining these two user support functions, and non-administrative tasks of the User Support representatives into the Training Program would be both effective and efficient, and conserve manpower.

7. Development Tasks: Although ISTP physical facilities are adequate to permit an early start on a COINS Training Program, there remains about twelve man-months of development work in preparing lectures, exercises, lesson guides, student instruction manuals, graphics, and course and student administration. This development work would occupy the four instructors and secretary for the first three months after their arrival and preceding the first course offering.

The Development Tasks for the COINS Training Program are as follows:

- (1) Submission of Plan for COINS Training Program, June 1974.
- (2) Approval of COINS Training Program.
- (3) Authorization of Resources for the Program.

- (4) Assignment of Program Personnel.
- (5) Development and Preparation of Basic COINS Course.
- (6) Presentation of first Basic COINS Course.
- (7) Continued presentation of Basic COINS Courses at a rate of about ten per year.
- (8) Development of COINS Refresher, Special Workshops, and Orientation courses.
- (9) Operation of full program of courses, FY 1976.
- (10) Continuous evaluation and revision of courses and program to reflect system changes, improvements and requirements.

The proposed development schedule for the COINS Training Program is shown in Figure 1. Events 2, 3, and 4 are dependent on senior Community management approval and action. The first course can be presented three months after assigned faculty personnel have been received. Additional courses can be presented at the rate of about one a month during FY 1975. The Refresher course, Special Workshops and Orientation courses would also be developed during FY 1975; all four courses would be presented at the rate of 18 per year starting in FY 1976.

Development Schedule for COINS

Training Program

1. Submit Trng Plan
2. Approve Plan
3. Authorize Resources
4. Assign Prgm Personnel
5. Prepare Basic COINS Course
6. Present First Course
7. Continue Courses
8. Develop Refresher, Workshop and Orientation Courses
9. Operate Full Prgm of Courses
10. Evaluation & Revision of Prgm & Courses

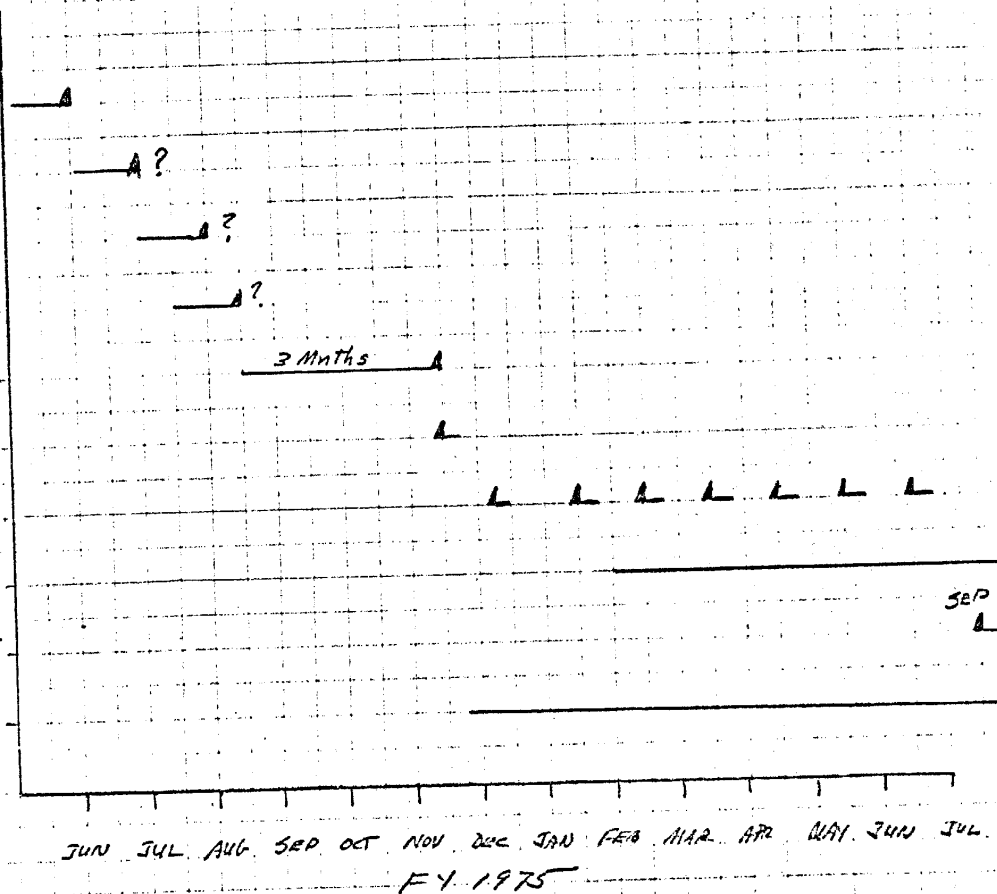


Figure 1

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